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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,053	03/01/2002	Rengaswamy Mohan	A-71011/RMA/MAK/JML	3226

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EXAMINER

AMSBURY, WAYNE P


ART UNIT	PAPER NUMBER
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2171

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Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/087,053	<b>Applicant(s)</b> MOHAN ET AL. 	
	<b>Examiner</b> Wayne Amsbury	<b>Art Unit</b> 2171	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 March 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-30 is/are allowed.
- 6) ☐ Claim(s) 1-18, 24, 25 and 31-36 is/are rejected.
- 7) ☒ Claim(s) 19-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

CLAIMS 1-36 ARE PENDING

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 31-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

An "operating model" is an abstract concept that is not a useful process, machine, manufacture, or composition of matter, as opposed, for instance, to a computer-implemented model.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

It is not clear what is intended by the phrase: "through by providing". In the interest of compact prosecution, it is considered that the term "through" is redundant.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-5, 7-14, 16-17, 24-25 and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Turtle et al (Turtle), US 5,488,725, 30 January 1996.**

Turtle teaches the gist of the invention as claimed in the BACKGROUND and provides improvements on it [SUMMARY].

As to **claim 1**, the instant specification uses documents as an example of unstructured objects [page 2 lines 4-7]. Turtle is directed to accessing unstructured documents [COL 1 line 14 and after; COL 5 line 10 and after]. The documents of Turtle are contained in a document database that corresponds to at least one unstructured object on a storage medium [COL 10 lines 5-8]. A concept-based scan evaluates documents and determines representation nodes that correspond to at least one concept for each object [COL 9 line 17 and after]. The resulting representation memory is contained in memory [COL 10 lines 9-10 and elsewhere].

As to **claim 2**, Turtle builds a Bayesian (inference) query network [COL 2 line 42 and after; COL 6 line 56 and after], but the concepts on which this semantic network is based are deduced from the query text [COL 3 lines 38-47; COL 9 line 17 and after; COL 13 line 8 and after, and elsewhere]. Thus Turtle accepts search text, identifies concepts in the query, and uses the structured information in the form of a semantic network with nodes that represent concepts deduced from the query.

As to **claim 3**, Turtle provides for both manual and automatic indexing and the index phrase assigned to a subset of the collection [COL 7 lines 29-47].

Turtle uses estimation of frequencies of representation to identify concept classes (groupings) [COL 3 lines 38-47; COL 5 lines 28-37], thesaurus classes [COL 13 line 37 and after], and word indexes [COL 15 line 25 and after]. Thus the elements of category, concept, and concept grouping and indexing are taught in a variety of ways in Turtle.

One mapping of claim 3 to Turtle is set forth at COL 13 lines 58-63 with the treatment of an example:

Phrases, words, terms, thesaurus classes and the like are deduced from a *query* and used to create representation nodes in the *document* network.

a. A thesaurus class in particular corresponds to a category comprising at least one word.

b. Creation of representation nodes and closely related nodes [such as the three nodes of "independent contractor" in the running example of this section of Turtle] captures a set of concepts from the set of categories.

c. Proximities, synonyms, thesaurus classes and the like clearly expand the concept of a word or phrase into groupings.

d. Word indexes are employed to calculate the probabilities for query concepts [COL 15 lines 30-33]. The example above is used at COL 7 lines 29-47 to demonstrate indexing of the documents according to the concept groups.

As to **claim 4**, Turtle as a whole is directed to the statistics of concept frequencies.

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As to **claim 5**, the concept used to determine representation nodes, particularly after a thesaurus lookup correspond to the seed concepts of the claim.

As to **claim 7**, Turtle applies vectors to weight the frequency of occurrence concepts (and words) within a document [COL 15, particularly lines 43-46]. Turtle teaches that word positions and proximities are generally used in algebraic systems [COL 2 line 23-30, COL 3 lines 38-47] Proximities, which are positions, are included in the determination of representations in Turtle [COL 5 lines 28-37 and elsewhere].

As to **claim 8**, the network of Turtle is based on probabilities [COL 7 line 61 and after].

As to **claim 9**, Turtle ranks documents and eliminates all but D documents. Scores that are too low (i.e. below a threshold) are not considered [COL 8 line 63 to COL 9 line 16] See also the discussion of probability thresholds at COL 20 line 50 and after.

The elements of **claims 10-13, 16-17, 24-25 and 31-34** are rejected in the analysis above and these claims are rejected on that basis.

As to **claim 14**, Turtle teaches the use of a disk drive for storage [COL 9 line 62 and after].

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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**Claims 6, 15, 18 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turtle et al (Turtle), US 5,488,725, 30 January 1996.**

As to **claim 6**, Turtle does not explicitly note all of the claimed steps for use of a thesaurus or dictionary look-up. **Official notice** is taken that the claimed uses of a thesaurus and/or dictionary were well known at the time of the invention. **It would have been obvious** to one of ordinary skill in the art at the time of the invention to use a thesaurus and/or dictionary in the manner claimed because a these instruments are efficient for determining such word relationships.

As to **claim 15**, **official notice** is taken that it was well known at the time of the invention to use Internet servers for storage of data. **It would have been obvious** to one of ordinary skill in the art at the time of the invention to use an Internet server as a memory device because it would provide flexible and efficient access to distributed memory.

As to **claim 18**, **official notice** is taken that the use of relational databases was well known in the art at the time of the invention. Turtle notes the utility of relational information [COL 27 lines 57-62], but does not specify a relational database/data\_structure for this purpose. **It would have been obvious** to one of ordinary skill in the art at the time of the invention to store structured information of various related kinds in a relational database because it would provide for efficient organization and access to the data and to data relationships.

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For example, the memory of Turtle contains a phrase database, and stemmed phrases, and legal sources [COL 10 line 27 and after; COL 12 line 62 and after]. It involves thesaurus classes, synonyms, and the like. AS noted above, it involves word indexes. All of these sources are brought to bear on the use of Turtle's semantic network.

As to **claims 35-36**, Turtle does not explicitly state the use of lists, but the objects, users, concepts, related concepts, and classifications are integral parts of a system that may be very extensive and must be organized. **It would have been obvious** to one of ordinary skill in the art at the time of the invention to use lists to organize these elements of the system because that provides for efficient access to them.

**5. Claims 19-23 are objected to as being dependent** upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

These claims involve explicit record structures that are not anticipated nor suggested by the prior art of record.

**6. Claims 26-30 are allowed.**

These claims involve explicit record structures that are not anticipated nor suggested by the prior art of record.



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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Amsbury whose telephone number is 703-305-3828. The examiner can normally be reached on M-TH 7-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WPA

  
WAYNE AMSBURY  
PRIMARY PATENT EXAMINER